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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/672,204	09/28/2000	Ted Chongpi Lee		8791

26291 7590 12/19/2003

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EXAMINER	
OSMAN, RAMY M	
ART UNIT	**PAPER NUMBER**
2157	4

DATE MAILED: 12/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/672,204	LEE ET AL.	
	Examiner	Art Unit	
	Ramy M Osman	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☒ Claim(s) 2 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. Claim 2 objected to because of the following informalities:

It is not understood whether it is the first path or the second path that has facilities having bandwidth utilizations levels below a first threshold. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-23 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The term facilities has not been defined in the specification. Facilities is a general term and makes the claims unclear as related to the invention.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3,7-10 and 12-23 rejected under 35 U.S.C. 102(b) as being anticipated by Morley et al. (CCBR, Optimal Loading of SONET BLSRs).

6. In reference to claims 1,7,12,17 and 21 Morley teaches the method, comprising the steps of:

determining a first circuit path between a source node and a destination node in a Synchronous Optical Network (SONET) ring comprising a plurality of nodes interconnected by links, each of said links having associated with it a plurality of facilities, each of said facilities having associated with it a respective bandwidth utilization level, said facilities having bandwidth utilization levels exceeding a first threshold level are not used to define said first circuit path (pages 1-3, Morley discloses determining a path between two nodes on a SONET ring comprising a plurality of nodes interconnected by spans. Each span has a line capacity *c*, and if the total load on any span exceeds *c* then that path and direction is not used).

7. In reference to claims 2,8,13,18 and 22, Morley teaches the method of claim 1, further comprising the step of:

selecting a second circuit path in the opposing direction to said first circuit path where facilities having bandwidth utilization levels below a first threshold level in said first path can

not be found for a Bi-directional Line Switched Ring (BLSR) (pages 1-3, Morley discloses choosing the other direction in a SONET BLSR if the total load on the spans do not exceed capacity *c*).

8. In reference to claims 3,9,10,14-16,19,20 and 23, Wan teaches the method of claim 1, further comprising the step of:

Adjusting said threshold level where the bandwidth utilization levels of facilities in said second path exceed said first threshold level (pages 4 and 5, Morley discloses capacity c as a variable which can be adjusted).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morley et al. (CCBR, Optimal Loading of SONET BLSRs) in view of Wan et al. (IEEE, Load Balancing in Counter Rotated SONET Rings).

11. In reference to claim 4, Morley teaches the method of claim 2. Morley fails to explicitly teach wherein said first circuit path is a short path. However, Wan teaches short path routing between a source and destination node to achieve optimal load balancing transmissions (columns 1-3, 14-16 and figure 1).

It would have been obvious to one having ordinary skill in the art to modify Morley by specifying that the first path is a short path as per the teachings of Wan so to achieve optimal load balancing.

12. In reference to claim 5, Morley teaches the method of claim 2. Morley fails to explicitly teach wherein said second circuit path is a long path. However, Wan teaches routing heavy requests along a long path between source and destination nodes (columns 1-3,14-16 and figure 1).

It would have been obvious to one having ordinary skill in the art to modify Morley by specifying that the second path is a long path as per the teachings of Wan so as to route heavy loads which exceed the threshold of the first path, as Morley teaches, along another path.

13. Claims 6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morley et al. (CCBR, Optimal Loading of SONET BLSRs) in view of Budka (U.S. Patent No. 6,014,567).

14. Morley teaches the method of claim 3. Morley fails to explicitly teach wherein personnel are notified of a lack of facilities. However, Budka teaches generating indications that a line is "congested" and cannot take any load (column 3 line 50 – column 4 line 67).

It would have been obvious to one having ordinary skill in the art to modify Morley by generating an alert that will show that a line is congested and cannot support anymore load as per the teachings of Budka so that appropriate action can be taken like increasing the line capacity etc..

Conclusion

15. The prior art made of record and not relied upon is considered pertinent and relevant to applicant's disclosure.

- Patent No. US006327622B1
- Patent No. US006545977B2
- Patent No. US006128279A
- Patent No. US006263368B1
- Patent No. US006606667B1
- Patent No. US006400859B1
- Patent No. US005657142A
- Morley,G.D. et al., "Current Approaches in the Design of Ring-based Optical Networks", 9/12/1999, Proceedings of 1999 IEEE Canadian Conference on Electrical & Computer Engineering, pgs 220-225
- Doshi, B.T. et al., 'Integrated Network Design Tools', July 1997, Alexandria: Egypt, Second IEEE Symposium on Computers and Communications, pgs 332-338
- Cosares S et al., 'An optimization problem related to balancing loads on SONET rings', 1994 Telecommunication Systems vol 3, pgs 165-181
- Buyukkoc C et al., 'Load balancing on SONET rings', 1996 Proceedings of ICT, Istanbul pgs 763-766

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramy M Osman whose telephone number is (703) 305-8050. The examiner can normally be reached on Monday through Friday 9AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703) 305-7562. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-9052.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

RMO
December 14, 2003

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100